



Traffic Safety Basic Facts 2007

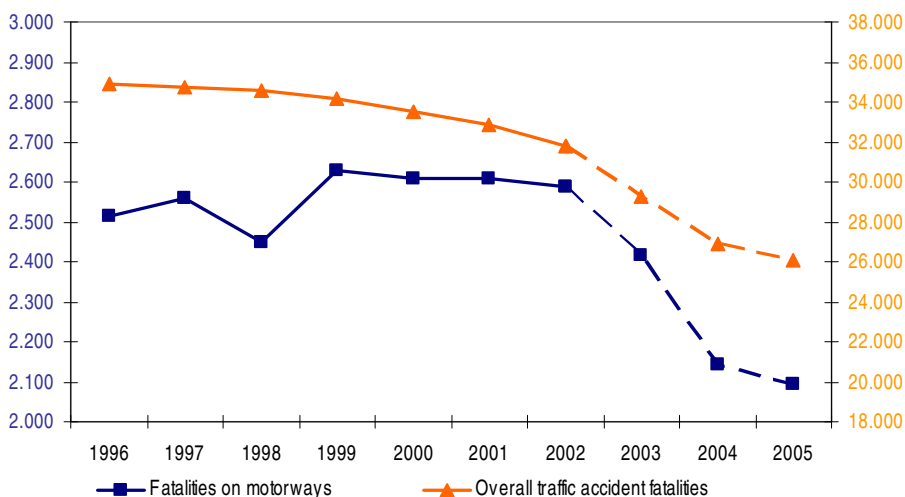
Motorways

More than 25.000 people were killed in traffic accidents on motorways in 14 European Union countries (EU-15, without Germany) between 1996 and 2005¹. This number represents about 7,7% of all traffic accident fatalities in those countries.

There were 2.515 traffic accident fatalities in 1996, and the number had fallen by 16,8% by 2005¹. The total number of traffic accident fatalities in the 14 European Union countries also fell significantly over the same decade, by 25%.

There were 7,4% more accident fatalities on motorways in 1999 than in 1998, although the overall number of road fatalities fell by 1,2%. It is also worth noting that the number of fatalities on motorways in the 14 countries scarcely changed between 2000 and 2002 (0,8% reduction), whereas the overall number of road accident fatalities decreased by 5,2%. Figure 1 also shows that the number of fatalities fell less in 2005 than in 2003 and 2004, both overall and on motorways.

Figure 1: Fatalities evolution in the EU-14², 1996-2005^{1,3}



Source: CARE Database / EC
Date of query: November 2007

Table 1 provides an overview of the changes in the number of fatalities on motorways split by country.

¹ Using latest data available, i.e. 2005 for all countries except LU (2002), IE and NL (2003) and IT (2004).

² See Table "Definition of EU-level and used country abbreviations" on page 12.

³ For HU, PL only 2005 data are available therefore they are excluded from the figure. EE and MT have no motorways.

There was a decrease of 16,8% in traffic accident fatalities on motorways in the decade from 1996 to 2005¹.





Table 1: Fatalities on motorways by country, 1996-2005^{1,4}

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE	201	192	223	213	238	196	172	140	125	161
DK	30	32	30	41	29	38	48	31	27	31
EL	148	72	61	105	61	86	69	58	116	111
ES	314	313	353	327	354	376	324	372	279	221
FR	453	470	497	492	527	487	521	439	316	323
IE	2	3	0	1	6	4	5	8	8	8
IT	752	848	711	804	764	773	801	711	648	648
LU	16	11	8	6	9	7	12	12	12	12
HU	-	-	-	-	-	-	-	-	-	48
NL	182	156	108	132	138	124	123	151	151	151
AT	104	121	141	146	126	156	126	107	118	89
PL	-	-	-	-	-	-	-	-	-	33
PT	116	104	105	123	128	112	115	127	116	98
FI	8	3	10	9	13	11	16	7	17	10
SE	20	40	25	25	25	30	27	34	42	24
UK	169	195	176	205	191	206	228	220	166	206
EU-14	2.515	2.561	2.448	2.629	2.609	2.606	2.588	2.417	2.141	2.093
Yearly ¹ change	-	1,8%	-4,4%	7,4%	-0,8%	-0,1%	-0,7%	-6,6%	-11,4%	-2,2%

Source: CARE Database / EC
Date of query: November 2007

The reduction in motorway fatalities between 1996 and 2005¹ was greatest in Spain (29,6%).

From Table 2 it can be seen that the rate of fatalities per million inhabitants on motorways is higher in Austria and Belgium than in the other European countries, and hence higher⁴ than the average rate of the 16 EU countries.

⁴ Due to small numbers, IE, LU and FI were not taken into account in comparisons.





Table 2: Fatalities on motorways per million inhabitants, 1996-2005^{1,4}

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE	19,8	18,9	21,9	20,8	23,2	19,1	16,6	13,5	12,0	15,4
DK	5,7	6,1	5,7	7,7	5,4	7,1	8,9	5,8	5,0	5,7
EL	13,8	6,7	5,6	9,6	5,6	7,9	6,3	5,3	10,5	10,0
ES	7,9	7,9	8,9	8,2	8,8	9,2	7,9	8,9	6,5	5,1
FR	7,6	7,9	8,3	8,1	8,7	8,0	8,5	7,1	5,1	5,2
IE	0,5	0,8	0,0	0,3	1,6	1,0	1,3	2,0	2,0	1,9
IT	13,2	14,9	12,5	14,1	13,4	13,6	14,0	12,3	11,1	11,1
LU	38,6	26,2	18,8	13,9	20,6	15,9	26,9	26,7	26,5	26,2
HU	-	-	-	-	-	-	-	-	-	4,8
NL	11,7	10,0	6,9	8,3	8,7	7,7	7,6	9,3	9,3	9,3
AT	13,1	15,2	17,7	18,3	15,7	19,4	15,6	13,2	14,4	10,8
PL	-	-	-	-	-	-	-	-	-	0,9
PT	11,5	10,3	10,4	12,1	12,5	10,9	11,1	12,1	11,1	9,3
FI	1,6	0,6	1,9	1,7	2,5	2,1	3,1	1,3	3,3	1,9
SE	2,3	4,5	2,8	2,8	2,8	3,4	3,0	3,8	4,7	2,7
UK	2,9	3,3	3,0	3,5	3,2	3,5	3,8	3,7	2,8	3,4
EU-14	8,6	8,8	8,3	8,9	8,8	8,8	8,7	8,0	7,1	6,8
EU-16	-	-	-	-	-	-	-	-	-	6,1

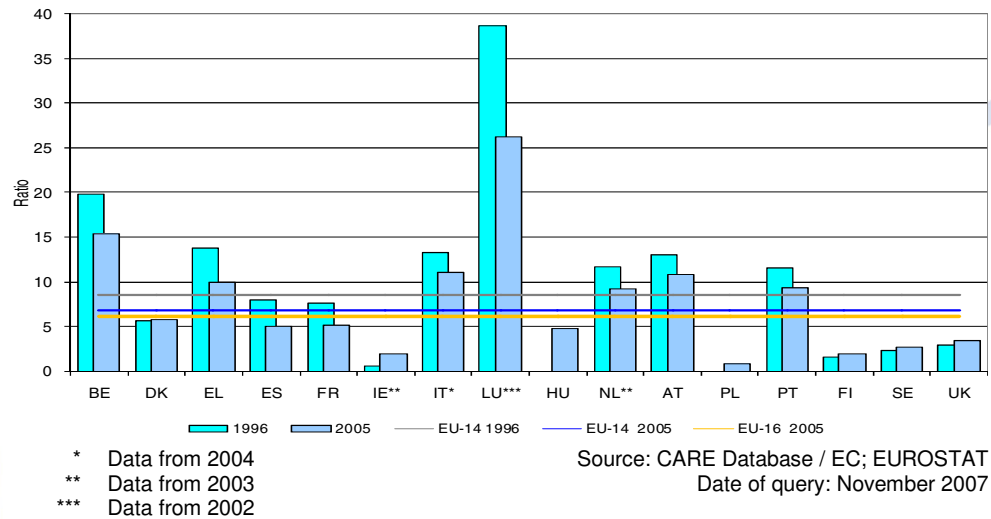
Source: CARE Database / EC; EUROSTAT
Date of query: November 2007

Figure 2 shows that the motorway fatality rate decreased by almost 21% between 1996 and 2005¹, from 8,6 per million inhabitants in 1996 to 6,8 in 2005. The corresponding fatality rate for the non-motorway road network decreased by approximately 22%, from 110,9 per million people to 86,5. The motorway fatality rate fell most rapidly over this decade in Spain (29,6%), whereas Belgium had the highest fatality rate in 2005 (15,4). In nine of the countries the rate was below the average for the 16 EU countries.

Spain experienced a considerable reduction in fatality rates on its motorway network within the examined period.



Figure 2: Fatalities on motorways per 10⁶ inhabitants, 1996 versus 2005^{1,4}



A fairer comparison of the level of safety on motorways involves the fatality rate per thousand kilometres of motorway. Using this exposure measure (motorway network length), Table 3 and Figure 3 show that the motorway fatality rate in Portugal fell considerably between 1996 and 2005 (by 67,2%). The average fatality rate in 2005¹ for the EU-14² is 49,0 (31,5% less than in 1996). The inclusion of data from Hungary and Poland (EU-16) increases the average slightly to 49,6.

Table 3: Fatalities on motorways per 1000 km of motorways, 1996-2005^{1,4}

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE	120,1	114,4	132,6	126,0	139,8	113,5	99,5	81,0	71,6	92,2
DK	36,1	37,4	34,4	46,0	30,4	39,1	47,5	30,7	26,7	30,7
EL	314,9	206,6	171,1	236,5	95,9	115,9	93,0	78,2	156,3	149,6
ES	43,0	40,4	42,7	36,8	39,1	39,3	33,3	36,2	27,1	21,5
FR	52,8	53,1	53,4	51,1	54,0	48,4	51,0	42,3	30,5	31,1
IE	25,0	31,9	0,0	9,7	58,3	32,0	40,0	45,5	41,7	41,7
IT	116,4	131,1	109,8	124,1	117,9	119,3	123,6	109,8	100,0	-
LU	139,1	95,7	69,6	52,2	78,9	60,9	104,3	-	-	-
HU	-	-	-	-	-	-	-	-	-	84,4
NL	77,9	66,8	48,5	57,6	60,9	54,4	53,9	65,4	-	-
AT	64,7	75,0	87,4	89,4	77,2	94,8	76,6	64,1	70,4	53,1
PL	-	-	-	-	-	-	-	-	-	59,8
PT	163,0	130,5	83,8	85,4	86,2	67,3	62,7	69,0	63,4	53,4
FI	18,6	6,8	21,1	17,6	23,7	18,6	26,5	10,7	26,0	15,3
SE	14,8	28,1	17,4	16,8	16,7	19,9	17,5	21,4	26,4	15,1
UK	50,5	57,2	49,5	57,2	53,1	57,1	63,1	60,9	45,4	56,3
EU-14	71,5	70,7	64,9	67,1	65,5	63,4	62,1	56,8	50,1	49,0
EU-16	-	-	-	-	-	-	-	-	-	49,6

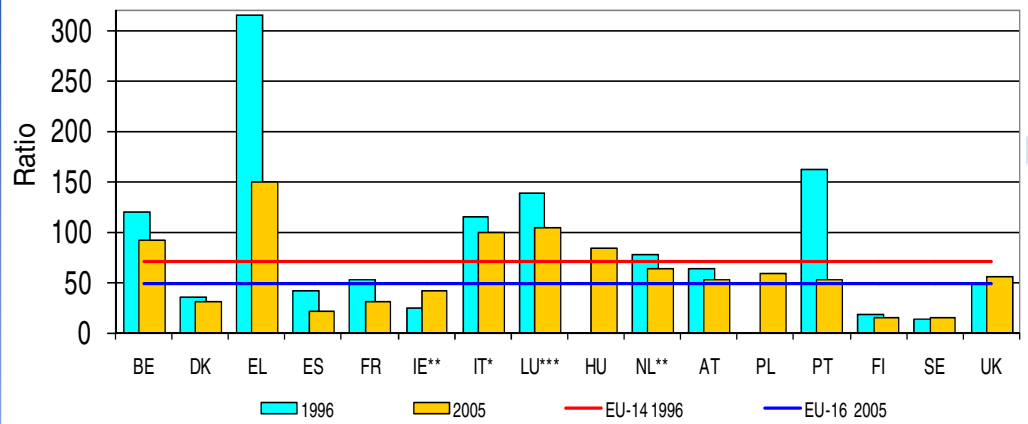
Source: CARE Database / EC; EUROSTAT
Date of query: November 2007

Main Figures
Children
Young People
The Elderly
Pedestrians
Bicycles
Motorcycles & Mopeds
Car Occupants
Heavy Goods Vehicles
Motorways
Junctions
Urban Areas





Figure 3: Fatalities on motorways per thousand km of motorways, 1996 and 2005⁴



* Data from 2004
** Data from 2003
*** Data from 2002

Source: CARE Database / EC; EUROSTAT
Date of query: November 2007

In 2005¹ motorways in Sweden were safer than those in the other 14 EU countries.

Greece and Belgium are the countries with the most fatalities per thousand kilometres of motorway network in 2005. Conversely, the fatality rate in Sweden in 2005¹ is significantly lower than the average rate for the EU-16 countries (15,1 compared to the average 49,6) therefore the motorways in this country were safer than the ones in the remaining 14 EU countries.

Table 4: Proportion of road accident fatality total that occurred on motorways, 1996-2005¹

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
BE	14,8%	14,1%	14,9%	15,3%	16,2%	13,2%	13,2%	11,5%	10,8%	14,8%
DK	5,8%	6,5%	6,0%	8,0%	5,8%	8,8%	10,4%	7,2%	7,3%	9,4%
EL	6,9%	3,4%	2,8%	5,0%	3,0%	4,6%	4,2%	3,6%	7,0%	6,7%
ES	5,7%	5,6%	5,9%	5,7%	6,1%	6,8%	6,1%	6,9%	5,9%	5,0%
FR	5,3%	5,6%	5,6%	5,8%	6,5%	6,0%	6,8%	7,2%	5,7%	6,1%
IE	0,4%	0,6%	0,0%	0,2%	1,4%	1,0%	1,3%	2,4%	-	-
IT	11,3%	12,6%	11,3%	12,0%	11,5%	11,6%	11,9%	11,7%	11,5%	-
LU	22,5%	18,3%	14,0%	10,3%	11,8%	10,00%	19,4%	-	-	-
HU	-	-	-	-	-	-	-	-	-	3,8%
NL	15,4%	13,4%	10,1%	12,1%	12,8%	12,5%	12,5%	14,7%	-	-
AT	10,1%	11,0%	14,6%	13,5%	12,9%	16,3%	13,2%	11,5%	13,4%	11,6%
PL	-	-	-	-	-	-	-	-	-	0,6%
PT	4,2%	4,1%	4,9%	6,2%	6,9%	6,7%	6,9%	8,2%	9,0%	7,9%
FI	2,0%	0,7%	2,5%	2,1%	3,3%	2,5%	3,9%	1,9%	4,5%	2,6%
SE	3,7%	7,4%	4,7%	4,3%	4,2%	5,2%	4,8%	6,4%	8,8%	5,5%
UK	4,5%	5,2%	4,9%	5,8%	5,3%	5,7%	6,4%	6,0%	4,9%	6,2%
EU-14 ¹	7,2%	7,4%	7,09%	7,7%	7,8%	7,9%	8,2%	8,3%	8,0%	8,0%
EU-16	-	-	-	-	-	-	-	-	-	6,6%

Source: CARE Database / EC; EUROSTAT
Date of query: November 2007

In Belgium, almost 15% of the road accident fatalities in 2005 occurred on motorways, the largest proportion in the 16 EU





countries with available data. By contrast, the proportion of fatalities occurred on motorways was lowest in Poland.

Table 4 shows that the proportion of fatalities that occurred on motorways in the EU-14 (not including new countries) increased from 7,2% in 1996 to 8,0% in 2005. The proportion in 2005 is 6,6% if data from the new countries (Hungary and Poland) are included.

Mode of transport

Table 5 shows that almost 70% of fatalities on motorways across the European countries were car or taxi occupants.

Table 5: Fatalities on motorways by mode of transport, 2005

	agricultural tractor	bus or coach	car or taxi	heavy goods vehicle	lorry, under 3,5 tons	moped	motorcycle	other	pedal cycle	pedestrian	Total
BE	0	0	120	12	21	0	6	0	0	2	161
DK	0	0	20	2	5	0	0	0	0	4	31
EL	0	3	66	2	3	2	19	2	1	13	111
ES	0	11	142	11	10	0	14	3	1	28	221
FR	0	10	208	27	10	1	42	0	0	25	323
IE**	0	0	6	0	1	0	1	0	0	0	8
IT*	0	4	438	35	23	0	62	4	0	31	597
LU***	0	0	12	0	0	0	0	0	0	0	12
HU	0	0	37	2	1	0	1	0	1	6	48
NL**	0	0	108	2	10	1	21	0	2	7	151
AT	0	0	68	6	6	0	1	1	1	6	89
PL	0	1	23	2	0	0	0	0	0	7	33
PT	0	0	54	9	15	0	9	2	0	9	98
FI	0	0	7	0	0	0	1	0	0	2	10
SE	0	0	14	3	1	0	2	0	0	4	24
UK	0	1	122	25	7	0	18	0	0	32	205
EU-16	0	30	1.445	138	113	4	197	12	6	176	2.122
%	0,0%	1,4%	68,1%	6,5%	5,3%	0,2%	9,3%	0,6%	0,3%	8,3%	100,0%

* Data from 2004
** Data from 2003
*** Data from 2002

Source: CARE Database / EC
Date of query: November 2007

In Belgium, almost 15% of the road accident fatalities in 2005 occurred on motorways, the largest proportion in the 16 EU countries.

Almost 70% of fatalities on motorways across the European countries were car or taxi occupants.

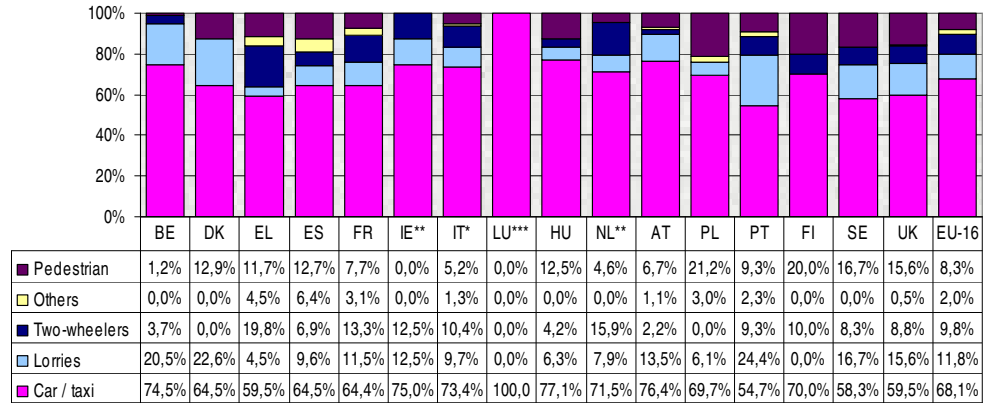


In Poland almost one-fifth (21,2%) of fatalities on motorways were pedestrians, a higher rate than in any of the other 15 countries.



Figure 4 shows that one-fifth (21,2%) of fatalities on motorways in Poland were pedestrians, a higher proportion than in any of the other 15 countries.

Figure 4: Distribution of fatalities on motorways by mode of transport, 2005

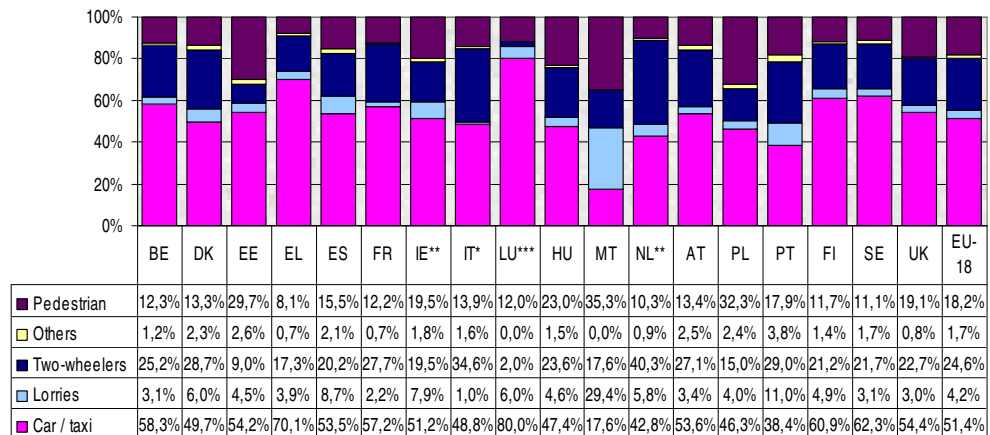


* Data from 2004
** Data from 2003
*** Data from 2002

Source: CARE Database / EC
Date of query: November 2007

Figure 5 Another interesting finding from Figure 4 and Figure 5 is that only 9,8% of the fatalities occurring on motorways in the 16 countries were users of two wheeled vehicles (motorcycle, moped or pedal cycle users). Greece has the largest percentage (19,8%), though the absolute number is small (22 fatalities) and hence conclusions might be misleading. On the other hand, two-wheeler user fatalities on the non-motorway road network formed 24,6% of the corresponding number of fatalities in the 18 European countries. (the respective percentage for the EU-14 is 27,1%). The percentages are highest in Portugal and Denmark (29,0% and 28,7%).

Figure 5: Distribution of fatalities on non-motorway road network by mode of transport in the EU-18², 2005



* Data from 2004
** Data from 2003
*** Data from 2002

Source: CARE Database / EC
Date of query: November 2007





Manoeuvre Type

Table 6 shows that the vehicle manoeuvre most frequently associated with fatalities on motorways in all EU-16 countries (except The Netherlands) is driving 'straight ahead'. 30,7% of fatalities were occupants of vehicles which were driving straight ahead and making no other manoeuvre. However, the corresponding percentage for this manoeuvre on other roads is larger (31,3%), as shown in Table 7. It is noted though that both percentages may be higher because of the many "not defined" manoeuvres. More specifically, in Italy, Luxemburg, Austria, Finland and Sweden over 90% of the manoeuvres are "not defined".

Table 6: Fatalities on motorways by manoeuvre type, 2005

	changing lane	over-taking	stopped stopping	straight ahead	turning	u turn	other	not defined	Total
BE	0	8	3	62	4	0	74	10	161
DK	0	0	0	27	0	0	0	4	31
EL	5	4	1	35	4	2	33	27	111
ES	0	11	5	158	2	0	17	28	221
FR	11	24	10	138	60	1	34	45	323
IE**	1	1	0	0	0	0	3	3	8
IT*	0	5	0	0	0	0	16	627	648
LU***	0	0	0	0	0	0	0	12	12
HU	0	2	0	40	0	0	0	6	48
NL**	0	0	60	13	69	0	0	9	151
AT	0	1	0	0	0	0	0	88	89
PL	0	1	0	0	0	0	0	32	33
PT	7	9	2	67	0	0	3	9	98
FI	0	0	0	0	0	0	0	10	10
SE	0	0	0	0	0	0	0	24	24
UK	16	10	15	127	0	0	5	32	205
EU-16	40	76	96	667	139	3	185	966	2.173
%	1,8%	3,5%	4,4%	30,7%	6,4%	0,1%	8,5%	44,5%	100%

* Data from 2004

** Data from 2003

*** Data from 2002

Source: CARE Database / EC
Date of query: November 2007

The vehicle manoeuvre most frequently associated with fatalities on motorways in all EU-16 countries except The Netherlands is driving 'straight ahead'





Table 7: Fatalities on non-motorway road network by manoeuvre type, 2005

	changing lane	over-taking	stopped stopping	straight ahead	turning	u turn	other	not defined	Total
BE	0	68	4	207	64	5	385	195	928
DK	3	0	7	234	16	0	0	40	300
EE	0	0	0	0	0	0	0	169	0
EL	3	5	2	53	3	1	107	110	284
ES	0	244	44	2.698	94	16	474	652	4.221
FR	33	255	23	2.437	1.172	23	168	884	4.995
IE**	5	21	0	0	14	0	150	139	329
IT*	0	58	0	384	75	0	76	4.384	4.977
LU***	0	0	0	0	0	0	0	50	50
HU	59	70	5	701	0	0	112	283	0
MT	0	0	0	9	1	0	0	7	0
NL**	0	0	474	55	234	0	0	114	877
AT	0	36	0	2	25	0	3	613	679
PL	0	220	6	0	0	0	0	5.185	0
PT	149	48	3	610	46	3	70	220	1.149
FI	0	0	0	0	0	0	0	369	369
SE	0	0	0	0	0	0	0	414	414
UK	35	182	23	1.702	122	9	33	508	2.614
EU-16	287	1.206	591	9.083	1.865	57	1.577	14.160	28.827
EU-18	287	1.206	591	9.092	1.866	57	1.577	14.336	29.013
%	1,0%	4,2%	2,0%	31,3%	6,4%	0,2%	5,4%	49,4%	100%

* Data from 2004
** Data from 2003
*** Data from 2002

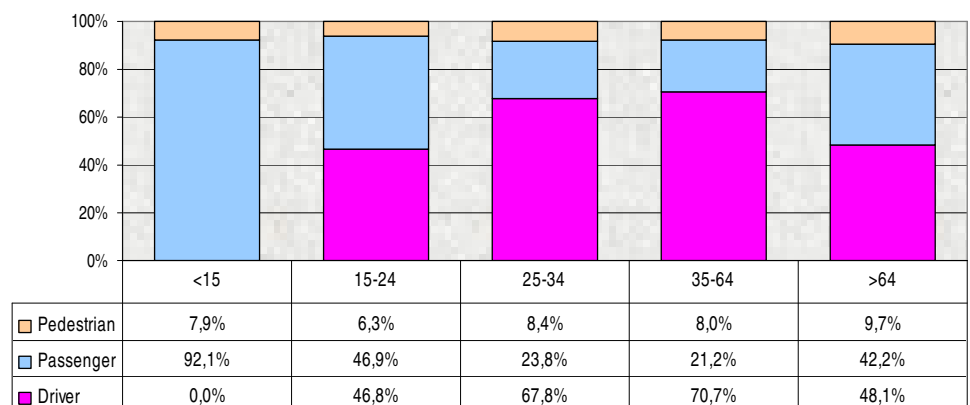
Source: CARE Database / EC
Date of query: November 2007

Age and Person class

Figure 6 shows that only a small percentage of fatalities on motorways are pedestrians (6,3% - 9,7%, according to age).

Figure 7 shows, however, that on the remaining road network 32% of child fatalities (less than 15 years old) and 38% of elderly fatalities (more than 64 years old) are pedestrians.

Figure 6: Fatalities on motorways by age and person class in the EU-16, 2005¹



Source: CARE Database / EC
Date of query: November 2007

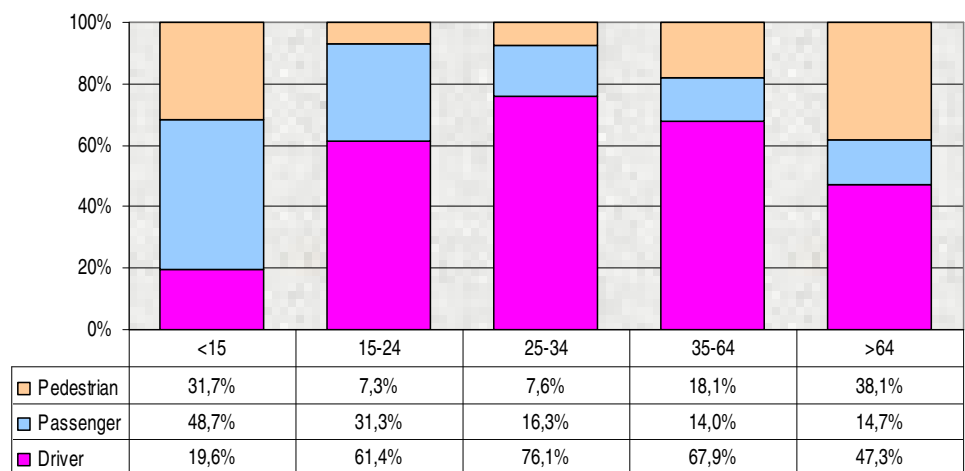
On motorways, the proportion of fatalities who are drivers is highest for the 35-64 age group, whereas on the remaining road network it is highest for the 25-34 age group.





Furthermore, the proportion of fatalities on motorways who are drivers is higher for the 35 – 64 age group (70,7%) than for other age groups; on the remaining road network, the 25 – 34 age group has the highest proportion who are drivers. Finally, young driver fatalities (up to 24 years old) are killed mainly on non-motorways; relatively few fatalities in this age group are killed on motorways (180, compared to 4.064 on the remaining road network), possibly indicating that young people drive more on the non-motorway network.

Figure 7: Fatalities on non-motorway road network by age and person class in the EU-18, 2005¹



Source: CARE Database / EC
Date of query: November 2007

Almost one-third of the fatalities on motorways, but also on the non-motorway road network occurred when it was dark.

Lighting Conditions

Figure 8, shows that in 2005¹, 32,7% (710 people) of the fatalities on motorways in the 16 European countries are killed in accidents in the dark. The respective percentage for the remaining road network appears to be similar (32,1%, corresponding to 9.309 people), as indicated in Figure 8.

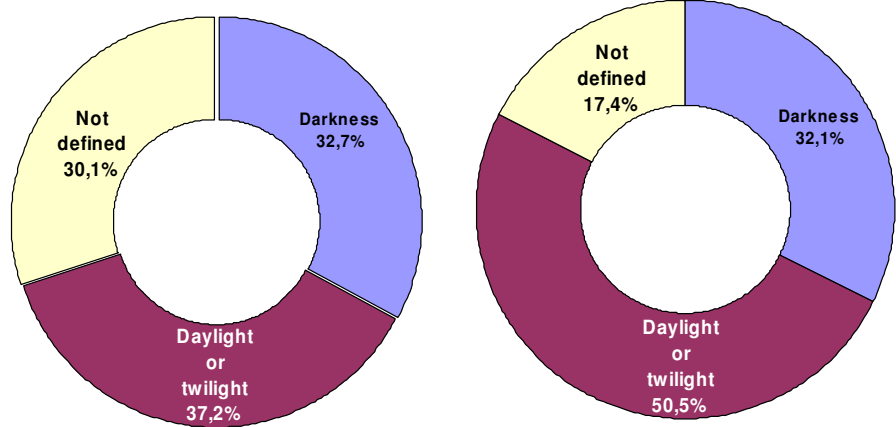




Figure 8: Fatalities on motorways and non-motorway network by lighting conditions, 2005¹

Motorway network (EU-16)

Non-motorway network (EU-18)



Source: CARE Database / EC
Date of query: November 2007

50,5% of fatalities on non-motorway roads are killed in daylight or twilight, whereas the percentage is smaller on motorways (37,2%). Nevertheless, the percentages may be higher because of a large number of fatalities with lighting condition “not defined”.



Disclaimer

The information in this document is provided as it is and no guarantee or warranty is given that the information is fit for any particular purpose. Therefore, readers use the information at their own risk and liability.

For more information

Further statistical information about fatalities is available from the CARE database at the Directorate-General for Energy and Transport of the European Commission, 28 Rue de Mot, B-1040 Brussels (see

ec.europa.eu/transport/roadsafety/road_safety_observatory/care_reports_en.htm).

Traffic Safety Basic Fact Sheets available from the European Commission concern:

- Main Figures
- Children (Aged <16)
- Young People (Aged 16-24)
- The Elderly (Aged >64)
- Pedestrians
- Bicycles
- Motorcycles and Mopeds
- Car Occupants
- Heavy Goods Vehicles & Buses
- Motorways
- Junctions
- Urban Areas

Definition of EU level and used Country abbreviations

EU 14

BE	Belgium
DK	Denmark
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PT	Portugal
FI	Finland
SE	Sweden
UK	United Kingdom

EU-16 = EU-14 +

HU	Hungary
PL	Poland

EU-18 = EU-16 +

EE	Estonia
MT	Malta

EU-27 = EU-18 +

BG	Bulgaria
CZ	Czech Republic
DE	Germany
CY	Cyprus
LV	Latvia
LT	Lithuania
RO	Romania
SI	Slovenia
SK	Slovakia





Detailed data on traffic accidents are published annually by the European Commission in the Annual Statistical Report. This includes country abbreviations and a glossary of definitions on all variables used.

All these reports and more information on the Integrated Project SafetyNet, co-financed by the European Commission, Directorate-General Energy and Transport are also available at the SafetyNet website: www.erso.eu.

Authors

George Yannis, Petros Evgenikos and Antonis Chaziris

NTUA, Greece

Stefan Hoeglinger and Thomas Leitner

KfV, Austria

Niels Bos and Martine Reurings

SWOV, The Netherlands

Jeremy Broughton, Brian Lawton and Louise Walter

TRL, United Kingdom

Manuel Andreu, Jean-François Pace and Jaime Sanmartín

INTRAS-UEG, Spain

